



February 26, 2008

Charles L.A. Terreni  
Chief Clerk and Administrator  
South Carolina Public Service Commission  
Post Office Drawer 11649  
Columbia, South Carolina 29211

Re: Carolina Power & Light Company d/b/a Progress Energy Carolinas, Inc.  
Power Plant Performance Report (January 2008)  
Docket No. 2006-224-E

Dear Mr. Terreni:

Enclosed are an original and one copy of the Power Plant Performance Report for Carolina Power & Light Company d/b/a Progress Energy Carolinas, Inc. for the month of January 2008.

Sincerely,

*Len S. Anthony (by dhs)*

Len S. Anthony  
Deputy General Counsel – Carolinas

LSA/dhs  
Enclosures  
45612

c: John Flitter (ORS)

January 2008

The following units had no off-line outages during the month of January:

Brunswick Unit 1  
Brunswick Unit 2  
Harris Unit 1  
Robinson Unit 2  
Roxboro Unit 2  
Roxboro Unit 3  
Roxboro Unit 4  
Mayo Unit 1

	Month of January 2008		Twelve Month Summary		See Notes*
MDC	938 MW		938 MW		1
Period Hours	744 HOURS		8,760 HOURS		
Net Generation	713,800 MWH		7,877,885 MWH		2
Capacity Factor	102.28 %		95.87 %		
Equivalent Availability	99.72 %		93.53 %		
Output Factor	102.28 %		101.31 %		
Heat Rate	10,294 BTU/KWH		10,355 BTU/KWH		
	MWH	% of Possible	MWH	% of Possible	
Full Scheduled	0	0.00	326,159	3.97	3
Partial Scheduled	1,925	0.28	51,926	0.63	4
Full Forced	0	0.00	114,389	1.39	5
Partial Forced	0	0.00	39,441	0.48	6
Economic Dispatch	0	0.00	0	0.00	7
Possible MWH	697,872		8,216,880		8

\* See 'Notes for Nuclear Units' filed with the January 2008 report.

\*\* Gross of Power Agency

	Month of January 2008		Twelve Month Summary		See Notes*
MDC	937 MW		937 MW		1
Period Hours	744 HOURS		8,760 HOURS		
Net Generation	705,183 MWH		7,147,710 MWH		2
Capacity Factor	101.16 %		87.08 %		
Equivalent Availability	99.40 %		86.36 %		
Output Factor	101.16 %		99.72 %		
Heat Rate	10,445 BTU/KWH		10,557 BTU/KWH		
	MWH	% of Possible	MWH	% of Possible	
Full Scheduled	0	0.00	281,042,990	3,423.96	3
Partial Scheduled	4,197	0.60	79,241	0.97	4
Full Forced	0	0.00	0	0.00	5
Partial Forced	0	0.00	4,886	0.06	6
Economic Dispatch	0	0.00	0	0.00	7
Possible MWH	697,128		8,208,120		8

\* See 'Notes for Nuclear Units' filed with the January 2008 report.

\*\* Gross of Power Agency

	Month of January 2008		Twelve Month Summary		See Notes*
MDC	900 MW		900 MW		1
Period Hours	744 HOURS		8,760 HOURS		
Net Generation	692,158 MWH		7,403,437 MWH		2
Capacity Factor	103.37 %		93.90 %		
Equivalent Availability	100.00 %		92.94 %		
Output Factor	103.37 %		100.60 %		
Heat Rate	10,636 BTU/KWH		10,841 BTU/KWH		
	MWH	% of Possible	MWH	% of Possible	
Full Scheduled	0	0.00	523,410	6.64	3
Partial Scheduled	0	0.00	7,901	0.10	4
Full Forced	0	0.00	1,320	0.02	5
Partial Forced	0	0.00	66,157	0.84	6
Economic Dispatch	0	0.00	0	0.00	7
Possible MWH	669,600		7,884,000		8

\* See 'Notes for Nuclear Units' filed with the January 2008 report.

\*\* Gross of Power Agency

	Month of January 2008		Twelve Month Summary		See Notes*
MDC	710 MW		710 MW		1
Period Hours	744 HOURS		8,760 HOURS		
Net Generation	564,514 MWH		5,742,305 MWH		2
Capacity Factor	106.87 %		92.33 %		
Equivalent Availability	100.00 %		88.58 %		
Output Factor	106.87 %		103.35 %		
Heat Rate	10,499 BTU/KWH		10,801 BTU/KWH		
	MWH	% of Possible	MWH	% of Possible	
Full Scheduled	0	0.00	628,586	10.11	3
Partial Scheduled	0	0.00	16,784	0.27	4
Full Forced	0	0.00	34,707	0.56	5
Partial Forced	0	0.00	24,164	0.39	6
Economic Dispatch	0	0.00	9,775	0.16	7
Possible MWH	528,240		6,219,600		8

\* See 'Notes for Nuclear Units' filed with the January 2008 report.

	Month of January 2008		Twelve Month Summary		See Notes*
MDC	741 MW		741 MW		1
Period Hours	744 HOURS		8,760 HOURS		
Net Generation	428,878 MWH		4,749,039 MWH		2
Capacity Factor	77.79 %		73.16 %		
Equivalent Availability	99.59 %		91.99 %		
Output Factor	77.79 %		77.73 %		
Heat Rate	10,334 BTU/KWH		10,344 BTU/KWH		
	MWH	% of Possible	MWH	% of Possible	
Full Scheduled	0	0.00	346,022	5.33	3
Partial Scheduled	0	0.00	95,886	1.48	4
Full Forced	0	0.00	35,457	0.55	5
Partial Forced	2,280	0.41	42,268	0.65	6
Economic Dispatch	120,146	21.79	1,222,488	18.83	7
Possible MWH	551,304		6,491,160		8

\* See 'Notes for Fossil Units' filed with the January 2008 report.

\*\* Gross of Power Agency

	Month of January 2008		Twelve Month Summary		See Notes*
MDC	639 MW		639 MW		1
Period Hours	744 HOURS		8,760 HOURS		
Net Generation	471,304 MWH		4,649,822 MWH		2
Capacity Factor	99.14 %		83.07 %		
Equivalent Availability	100.00 %		86.68 %		
Output Factor	99.14 %		93.08 %		
Heat Rate	9,150 BTU/KWH		9,153 BTU/KWH		
	MWH	% of Possible	MWH	% of Possible	
Full Scheduled	0	0.00	546,419	9.76	3
Partial Scheduled	0	0.00	127,592	2.28	4
Full Forced	0	0.00	55,881	1.00	5
Partial Forced	0	0.00	15,654	0.28	6
Economic Dispatch	4,112	0.86	218,981	3.91	7
Possible MWH	475,416		5,597,640		8

\* See 'Notes for Fossil Units' filed with the January 2008 report.



	Month of January 2008		Twelve Month Summary		See Notes*
MDC	705 MW		705 MW		1
Period Hours	744 HOURS		8,760 HOURS		
Net Generation	398,373 MWH		4,597,588 MWH		2
Capacity Factor	75.95 %		74.45 %		
Equivalent Availability	96.15 %		93.73 %		
Output Factor	75.95 %		77.36 %		
Heat Rate	10,955 BTU/KWH		11,115 BTU/KWH		
	MWH	% of Possible	MWH	% of Possible	
Full Scheduled	0	0.00	104,552	1.69	3
Partial Scheduled	15,252	2.91	81,538	1.32	4
Full Forced	0	0.00	102,613	1.66	5
Partial Forced	4,940	0.94	98,266	1.59	6
Economic Dispatch	105,955	20.20	1,191,243	19.29	7
Possible MWH	524,520		6,175,800		8

\* See 'Notes for Fossil Units' filed with the January 2008 report.

	Month of January 2008		Twelve Month Summary		See Notes*
MDC	698 MW		698 MW		1
Period Hours	744 HOURS		8,760 HOURS		
Net Generation	408,174 MWH		3,887,281 MWH		2
Capacity Factor	78.60 %		63.58 %		
Equivalent Availability	100.00 %		84.50 %		
Output Factor	78.60 %		73.37 %		
Heat Rate	10,544 BTU/KWH		10,535 BTU/KWH		
	MWH	% of Possible	MWH	% of Possible	
Full Scheduled	0	0.00	804,294	13.15	3
Partial Scheduled	0	0.00	120,696	1.97	4
Full Forced	0	0.00	0	0.00	5
Partial Forced	0	0.00	22,887	0.37	6
Economic Dispatch	111,138	21.40	1,277,051	20.89	7
Possible MWH	519,312		6,114,480		8

\* See 'Notes for Fossil Units' filed with the January 2008 report.

\*\* Gross of Power Agency

## NOTES FOR FOSSIL UNITS

1. Maximum Dependable Capacity (MDC) in MW: The gross electrical output measured at the output terminals of the turbine generator, during the most restrictive seasonal conditions, minus the normal station service loads.
2. MWH Generated in the Period: The gross electrical output measured at the output terminals of the turbine generator, minus the normal station service loads, during the gross hours of the reporting period.
3. MWH Not Generated Due to Full Scheduled Outages: Calculated by multiplying the full scheduled outage hours (breaker to breaker as reported to NERC) by the MDC rating. This assumes that the unit would be in demand at the time of the outage. However, if the system load was such that the total output of the unit would not be required (due to economic dispatch), the actual MWH not generated due to the outage would be less.
4. MWH Not Generated Due to Partial Scheduled Outages: Calculated by multiplying the partial scheduled outage hours by the MW derating (as reported to NERC). Also included is an estimate of the MWH not generated while reducing power to take the unit off line for a full scheduled outage and the MWH not generated while bringing the unit back to power after the outage (Ramp Time). However, if the system load was such that the total output of the unit would not have been required, the actual MWH not generated due to the outage would be less.
5. MWH Not Generated Due to Full Forced Outages: Calculated by multiplying the full forced outage hours (breaker to breaker as reported to NERC) by the MDC rating. This assumes that the unit would be in demand at the time of the outage. However, if the system load was such that the total output of the unit would not have been required (due to economic dispatch), the actual MWH not generated due to the outage would be less.

6. MWH Not Generated Due to Partial Forced Outages: Calculated by multiplying the partial forced outage hours by the MW derating (as reported to NERC). Included is an estimate of the MWH not generated while reducing power to take the unit off line for a full forced outage and the MWH not generated while bringing the unit back to power after the outage (Ramp Time). However, if the system load was such that the total output of the unit would not have been required, the actual MWH not generated due to the outage would be less.
7. MWH Not Generated Due to Economic Dispatch: Included is an estimate of the MWH not generated due to the unit not being in demand on a System Dispatch basis. System dispatch takes into consideration the reliability and stability of the system as well as economic dispatch since consideration must be given to the mix of generation on line at any one point in time. Also included are estimates of the MWH not generated due to plant conditions (not defined by NERC), which occur from time to time such as: high backpressure, silica in boiler water, phosphate water treatment carryover, instrumentation calibration, and equipment testing.
8. Total MWH Possible in Period: Calculated by multiplying MDC by hours in period.

## NOTES FOR NUCLEAR UNITS

1. Maximum Dependable Capacity (MDC) in MW: The gross electrical output measured at the output terminals of the turbine generator, during the most restrictive seasonal conditions, minus the normal station service loads.
2. MWH Generated in the Period: The gross electrical output measured at the output terminals of the turbine generator, minus the normal station service loads, during the gross hours of the reporting period.
3. MWH Not Generated Due to Full Scheduled Outages: Calculated by multiplying the full scheduled outage hours (breaker to breaker as reported to NERC) by the MDC rating. This assumes that the unit would be in demand at the time of the outage. However, if the system load was such that the total output of the unit would not have been required, the actual MWH not generated due to the outage would be less.
4. MWH Not Generated Due to Partial Scheduled Outages: Calculated by multiplying the partial scheduled outage hours by the MW derating (as reported to NERC). Also included is an estimate of the MWH not generated while reducing power to take the unit off line for a full scheduled outage and the MWH not generated while bringing the unit back to power after the outage (Ramp Time). However, if the system load was such that the total output of the unit would not have been required, the actual MWH not generated due to the outage would be less.
5. MWH Not Generated Due to Full Forced Outages: Calculated by multiplying the full forced outage hours (breaker to breaker as reported to NERC) by the MDC rating. This assumes that the unit would be in demand at the time of the outage.

6. MWH Not Generated Due to Partial Forced Outages: Calculated by multiplying the partial forced outage hours by the MW derating (as reported to NERC). Included is an estimate of the MWH not generated while reducing power to take the unit off line for a full forced outage and the MWH not generated while bringing the unit back to power after the outage (Ramp Time). Also included are estimated of the MWH not generated due to plant conditions (not defined by NERC) which occur from time to time such as: preconditioning of fuel, excessive cooling water temperature, and off-peak equipment testing required by the NRC. However, if the system load was such that the total output of the unit would not have been required, the actual MWH not generated due to the outage would be less.
7. MWH Not Generated Due to Economic Dispatch: Included is an estimate of the MWH not generated due to the unit not being fully in demand based on system load conditions. Also included is the MWH not generated on the nuclear plants due to fuel limitations in the cores or the fuel being “stretched” to meet refueling outages.
8. Total MWH Possible in Period: Calculated by multiplying MDC by hours in period.

Plant	Unit	Current MW Rating	January 2007 - December 2007	January 2008	January 2008 - January 2008
Asheville	1	197	63.64	83.18	83.18
Asheville	2	186	73.17	85.32	85.32
Cape Fear	5	144	78.67	83.09	83.09
Cape Fear	6	173	72.38	71.34	71.34
Lee	1	77	62.15	67.22	67.22
Lee	2	77	62.47	61.18	61.18
Lee	3	252	66.38	0.70	0.70
Mayo	1	741	72.10	77.79	77.79
Robinson	1	180	74.63	73.02	73.02
Roxboro	1	383	78.01	75.29	75.29
Roxboro	2	639	80.06	99.14	99.14
Roxboro	3	705	74.37	75.95	75.95
Roxboro	4	698	62.40	78.60	78.60
Sutton	1	97	56.26	57.21	57.21
Sutton	2	106	63.19	69.62	69.62
Sutton	3	403	55.53	86.06	86.06
Weatherspoon	1	49	53.86	55.98	55.98
Weatherspoon	2	49	55.68	48.72	48.72
Weatherspoon	3	79	68.70	80.15	80.15
Fossil System Total		5,235	69.82	75.85	75.85
Brunswick	1	938	95.92	102.28	102.28
Brunswick	2	937	86.99	101.16	101.16
Harris	1	900	93.90	103.37	103.37
Robinson Nuclear	2	710	92.26	106.87	106.87
Nuclear System Total		3,485	92.25	103.19	103.19
Total System		8,720	78.79	86.78	86.78

Amended SC Fuel Rule  
Related to Nuclear Operations

There shall be a rebuttable presumption that an electrical utility made every reasonable effort to minimize cost associated with the operation of its nuclear generation system if the utility achieved a net capacity factor of  $\geq 92.5\%$  during the 12 month period under review. For the test period April 1, 2007 through January 31, 2008, actual period to date performance is summarized below:

Period to Date: April 1, 2007 to January 31, 2008

Nuclear System Capacity Factor Calculation (Based on net generation)

A.. Nuclear system actual generation for SCPSC test period                      A = 23,755,716 MWH

B. Total number of hours during SCPSC test period                                      B =            7,345 hours

C. Nuclear system MDC during SCPSC test period (see page 2)                      C =            3,485 MW

D. Reasonable nuclear system reductions (see page 2)                                  D =    2,255,645 MWH

A. SC Fuel Case nuclear system capacity factor:  $[(A + D) / (B + C)] * 100 = 101.6\%$

NOTE:

If Line Item E  $> 92.5\%$ , presumption of utility's minimum cost of operation.

If Line Item E  $< 92.5\%$ , utility has burden of proof of reasonable operations.



Amended SC Fuel Rule  
Nuclear System Capacity Factor Calculation  
Reasonable Nuclear System Reductions  
Period to Date: April 1, 2007 to January 31, 2008

Nuclear Unit Name and Designation	BNP Unit # 1	BNP Unit # 2	HNP Unit # 1	RNP Unit # 2	Nuclear System
Unit MDC	938 MW	937 MW	900 MW	710 MW	3,485 MW
Reasonable refueling outage time (MWH)	0	392,521	480,210	628,587	
Reasonable maintenance, repair, and equipment replacement outage time (MWH)	492,066	20,139	75,776	34,707	
Reasonable coast down power reductions (MWH)	0	0	0	6,195	
Reasonable power ascension power reductions (MWH)	31,774	32,350	0	22,063	
Prudent NRC required testing outages (MWH)	6,150	18,455	456	0	
SCPSC identified outages not directly under utility control (MWH)	0	0	0	0	
Acts of Nature reductions (MWH)	0	0	0	14,196	
Reasonable nuclear reduction due to low system load (MWH)	0	0	0	0	
Unit total excluded MWH	529,990	463,465	556,442	705,748	
Total reasonable outage time exclusions [carry to Page 1, Line D]					2,255,645